

CLAIMS

1. A therapeutic agent or prophylactic agent for a disease requiring enhancement of bone morphogenetic protein production or promotion of osteogenesis, characterized in that the therapeutic agent or prophylactic agent comprises as an effective ingredient at least one compound selected from the group consisting of (a) an acidic saccharide, (b) a polyacrylic acid, (c) chlorogenic acid and (d) an oxidation processed product of chlorogenic acid.
- 10 2. The therapeutic agent or prophylactic agent according to claim 1, wherein the acidic saccharide is at least one acidic saccharide selected from the group consisting of an acidic polysaccharide, an acidic oligosaccharide, an acidic monosaccharide, and a degradation product thereof.
- 15 3. The therapeutic agent or prophylactic agent according to claim 1, wherein the acidic saccharide is at least one acidic saccharide selected from the group consisting of fucoidan, heparin, a dextran sulfate, chondroitin sulfate B, pectic acid, an acidic polysaccharide derived from *Spirulina*, a fucoidan degradation product, carrageenan λ , carrageenan κ , carrageenan ι , a low-molecular weight heparin, a heparan sulfate and an acidic polysaccharide derived from *Chlorella*.
- 20 4. An agent for enhancement of bone morphogenetic protein production or an agent for promotion of osteogenesis, characterized in that the agent comprises as an effective ingredient at least one compound selected from the group consisting of (a) an acidic saccharide, (b) a polyacrylic acid, (c) chlorogenic acid

and (d) an oxidation processed product of chlorogenic acid.

5. The agent for enhancement of bone morphogenetic protein production or
the agent for promotion of osteogenesis according to claim 4, wherein the acidic
5 saccharide is at least one acidic saccharide selected from the group consisting of
an acidic polysaccharide, an acidic oligosaccharide, an acidic monosaccharide,
and a degradation product thereof.

10. The agent for enhancement of bone morphogenetic protein production or
the agent for promotion of osteogenesis according to claim 4, wherein the acidic
saccharide is at least one acidic saccharide selected from the group consisting of
fucoidan, heparin, a dextran sulfate, chondroitin sulfate B, pectic acid, an acidic
15 polysaccharide derived from *Spirulina*, a fucoidan degradation product,
carrageenan λ , carrageenan κ , carrageenan ι , a low-molecular weight heparin, a
heparan sulfate and an acidic polysaccharide derived from *Chlorella*.

20. A food, beverage or feed for enhancement of bone morphogenetic protein
production or promotion of osteogenesis, characterized in that the food, beverage
or feed comprises as an effective ingredient at least one compound selected from
the group consisting of (a) an acidic saccharide, (b) a polyacrylic acid, (c)
chlorogenic acid and (d) an oxidation processed product of chlorogenic acid.

25. The food, beverage or feed for enhancement of bone morphogenetic
protein production or promotion of osteogenesis according to claim 7, wherein
the acidic saccharide is at least one acidic saccharide selected from the group

consisting of an acidic polysaccharide, an acidic oligosaccharide, an acidic monosaccharide, and a degradation product thereof.

9. The food, beverage or feed for promotion of osteogenesis or enhancement

5 of bone morphogenetic protein production according to claim 7, wherein the

acidic saccharide is at least one acidic saccharide selected from the group

consisting of fucoidan, heparin, a dextran sulfate, chondroitin sulfate B, pectic

acid, an acidic polysaccharide derived from *Spirulina*, a fucoidan degradation

product, carrageenan λ , carrageenan κ , carrageenan ι , a low-molecular weight

10 heparin, a heparan sulfate and an acidic polysaccharide derived from *Chlorella*.

10. A therapeutic agent or prophylactic agent for a disease requiring

enhancement of bone morphogenetic protein production or promotion of

osteogenesis, characterized in that the therapeutic agent or prophylactic agent

comprises as an effective ingredient an extract derived from algae.

15 11. An agent for enhancement of bone morphogenetic protein production or

an agent for promotion of osteogenesis, characterized in that the agent comprises

as an effective ingredient an extract derived from algae.

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12. A food, beverage or feed for enhancement of bone morphogenetic protein

production or promotion of osteogenesis, characterized in that the food, beverage

or feed comprises as an effective ingredient an extract derived from algae.